



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,899	03/15/2001	Seongmoon Wang	A7936	3488

7590

03/19/2004

LAW OFFICES
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
WASHINGTON, DC 20037-3213

EXAMINER

CHASE, SHELLY A

ART UNIT	PAPER NUMBER
----------	--------------

2133

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/805,899

Applicant(s)

WANG, SEONGMOON

Examiner

Shelly A Chase

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed 1-5-2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-35 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 to 35 are presented for examination.

Claim Objections

2. The objection to the claims in the first office action is withdrawn.

Claim Rejections - 35 USC § 102

3. The rejection of claim 1 as being anticipated by Malgorzata is withdrawn.

Information Disclosure Statement

4. The references listed in the information disclosure statement submitted on 1-5-2004 have been considered by examiner (see attached PTO-1449).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Strole et al. (A chip for weight prandom pattern generation, evaluation, and test Control, IEEE).

Claim 1:

Strole teaches a test method for generating test patterns to test hared to detect faults, the method comprising: locating faults based on a probability (see pg. 2057, sect. II), generating random test patterns for the faults using a linear feed back shift register (LFSR), (see pg. 1059, sect III) wherein the LFSR includes a tap ("global generation") for aiding in the generation of weights. Strole also teaches the generation of the random pattern for a reduced test length (see pg. 1058) and the hardware overhead is considered during the generation of the random test patterns (see pg. 1062 sect. V).

Allowable Subject Matter

7. Claims 2 to 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: although the prior art for instance Geuzerbroek et al. (*Test point insertion for compact test sets*), discloses generating test sets based on cost estimates, the prior art made of record fail to teach or fairly suggest the novelty as claimed. The prior art taken alone or in combination fail to teach or fairly suggest a method for generating the test set if the real cost is greater that a sum total of the estimated cost plus a predetermined error, performing an appropriate one of the following sub-steps as claimed in dependent claim 2. Claims 3 to 7 are directly dependent on claim 2 thus; these claims are allowable over the prior art made of record.

Art Unit: 2133

9. Claims 8 to 35 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art made of record teaches various methodologies for generating test sets for hard to detect faults. For instance Rohrbaugh et al. (USP 6067651), discloses test pattern generation wherein a list of faults are defined and test sequence are developed from the list of faults.

However, the prior art made of record taken alone or in combination fail to teach or fairly suggest a method for generating test sets for a fault list comprising the steps as claimed in independent claim 8. Claims 9 to 14 are directly or indirectly dependent on claim 8 thus; these claims are allowable over the prior art made of record.

Claims 15 and 29:

The prior art of made of record teaches different pattern generation applications for built-in self test for instance, Tsai (USP 6694466 B1), discloses a general test application scheme for improving the test quality wherein the test process is divided into multiple test sessions, Rajski (USP 6662327 B1), discloses a method for cluster test pattern generation wherein only a small set of center test vectors are applied to test a circuit under test and Toubia et al. (USP 6061818), discloses a method for generating test patterns wherein the bit sequence is altered by a bit fixing logic. However, the prior art taken alone or in combination fail to teach or fairly suggest the novel element as claimed. The prior art fail to teach or fairly suggest a parallel or serial type test per scan built-in self test circuit comprising: a decoder providing decoder outputs, wherein said decoder outputs control the R and S pins in the scan flip-flop, the decoder outputs being

Art Unit: 2133

input to the AND and OR gates. Claims 16 to 28 and 30 to 35 are directly or indirectly dependent on claims 15 and 29, thus these claims are allowable over the prior art made of record.

Response to Arguments

11. Applicant's arguments with respect to claims 1 to 35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Art Unit: 2133

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelly A Chase whose telephone number is 703-308-7246. The examiner can normally be reached on Mon-Thur from 8:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Shelly A Chase


ALBERT DECADY
CURRENTORY PATENT EXAMINER
TECHNICAL CENTER 2100